

FIG. 1 (PRIOR ART)

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 2 OF 60

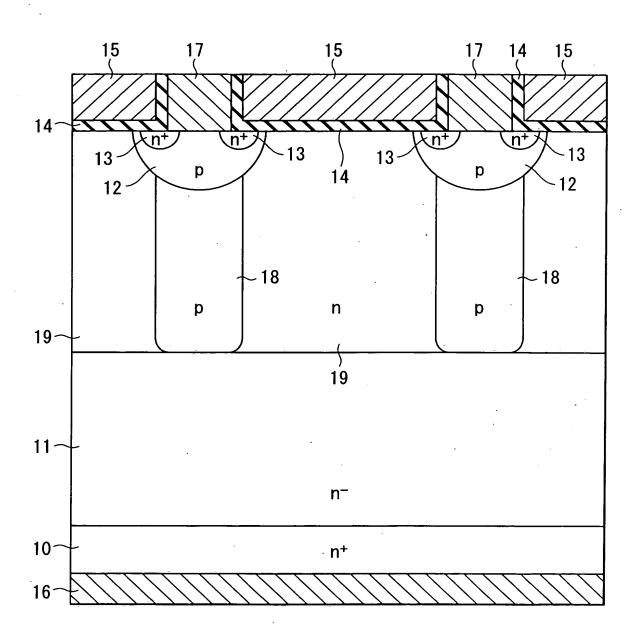


FIG. 2

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 3_ OF 60

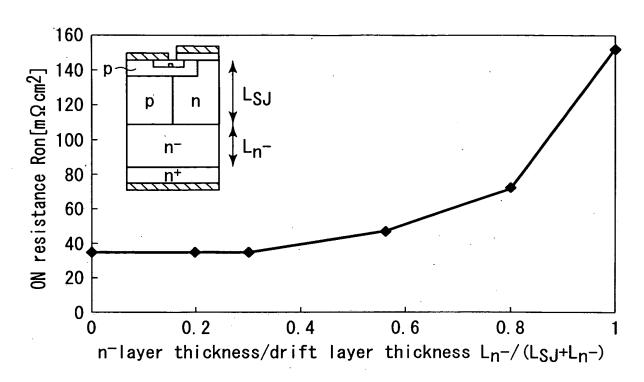


FIG. 3A

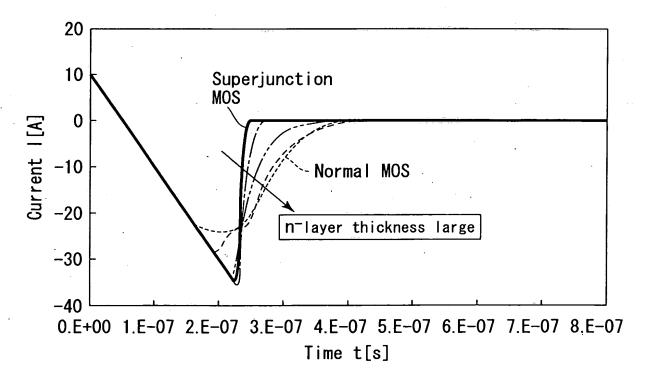
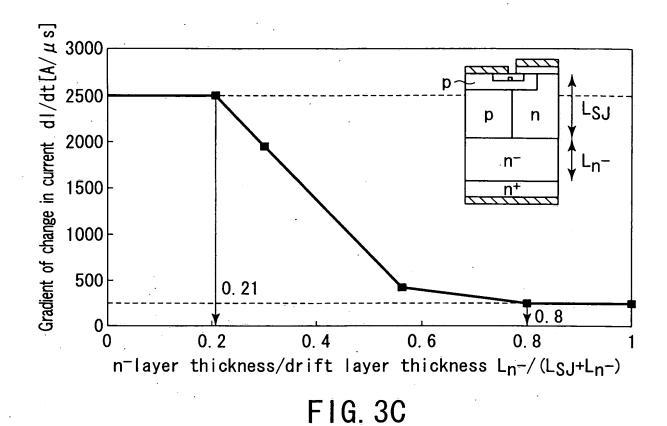


FIG. 3B

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 4 OF 60



1000 900 Superjunction MOS Normal MOS 800 Drain current Id[A/cm²] 700 n-layer thickness 600 large 500 400 300 200 100 01 200 400 600 800 1000 0 Drain voltage Vds[V]

FIG. 3D

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET <u>5</u> OF <u>60</u>

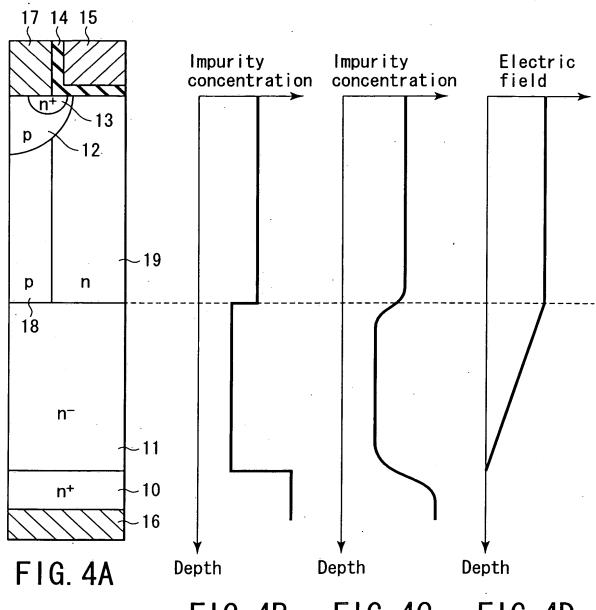
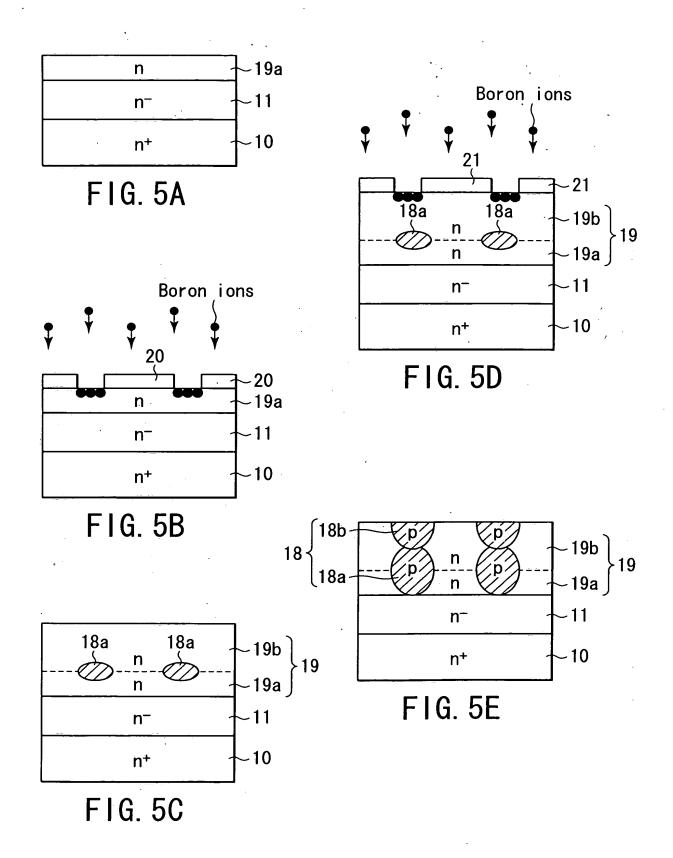


FIG. 4B FIG. 4C FIG. 4D

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET <u>6</u> OF <u>60</u>



OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 7_OF 60

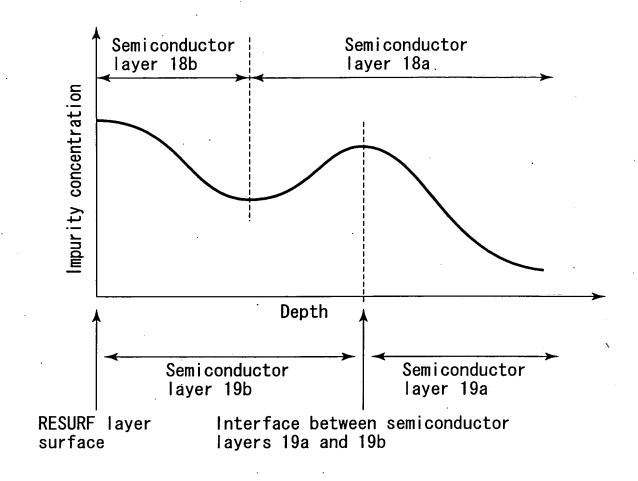


FIG. 5F

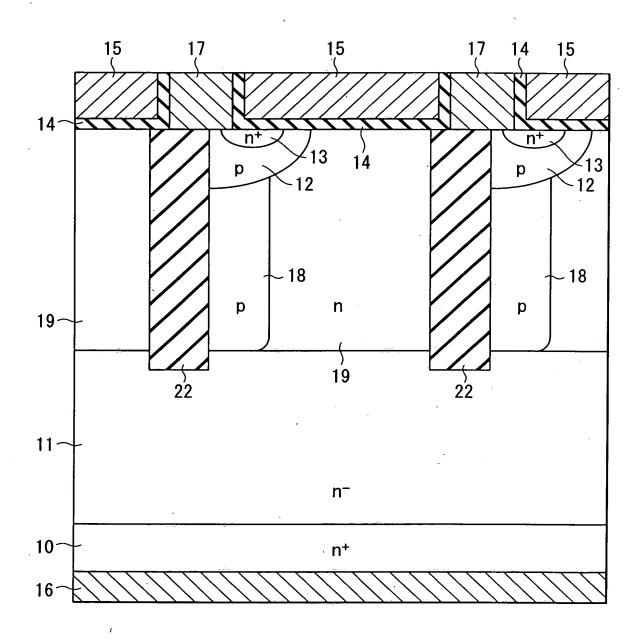


FIG. 6

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 9 OF 60

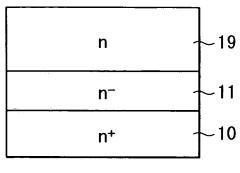


FIG. 7A

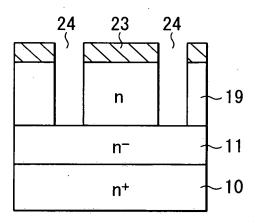


FIG. 7B

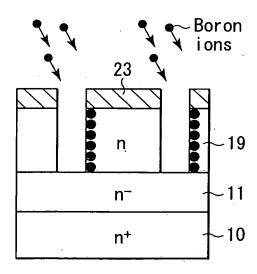
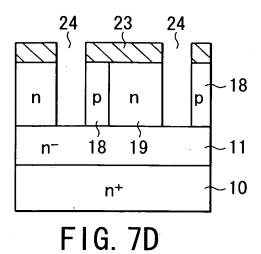


FIG. 7C



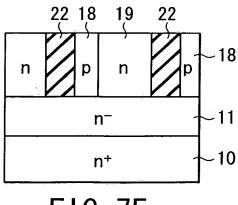


FIG. 7E

OBLON, SPĪVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 10 OF 60

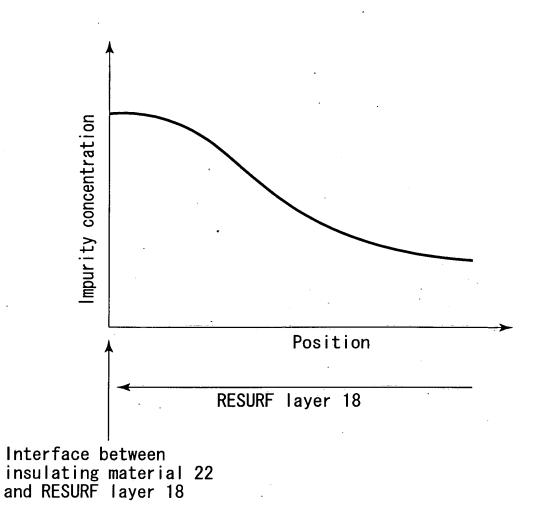


FIG. 7F

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 11 OF 60

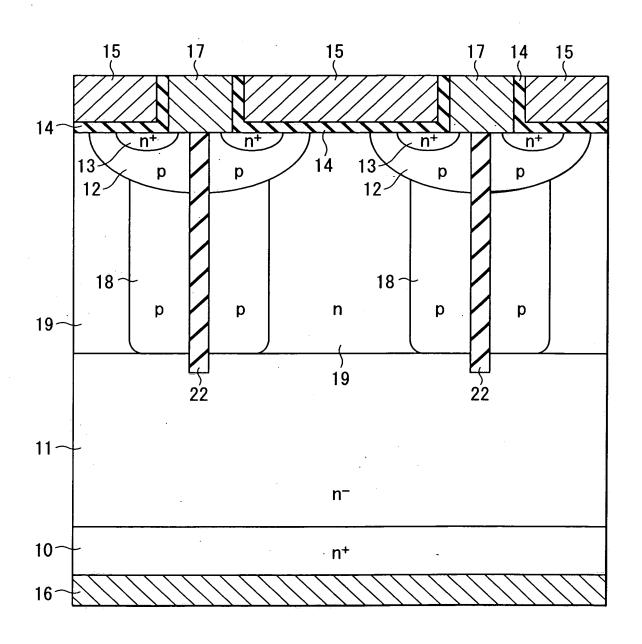
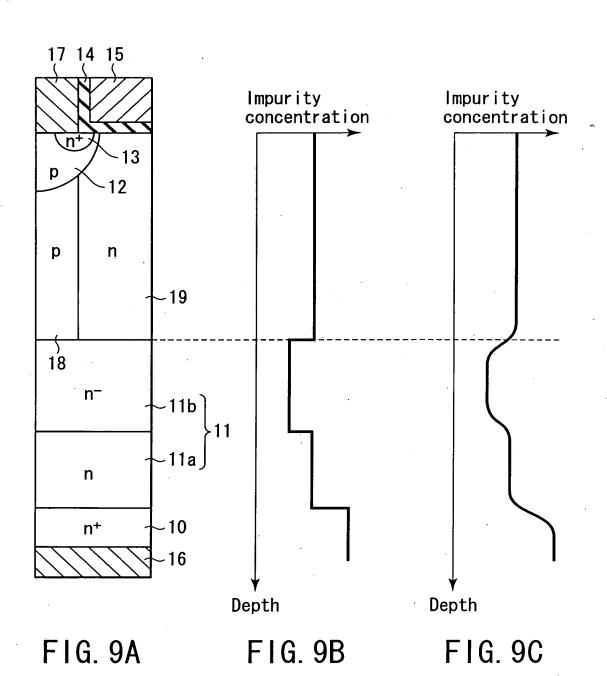
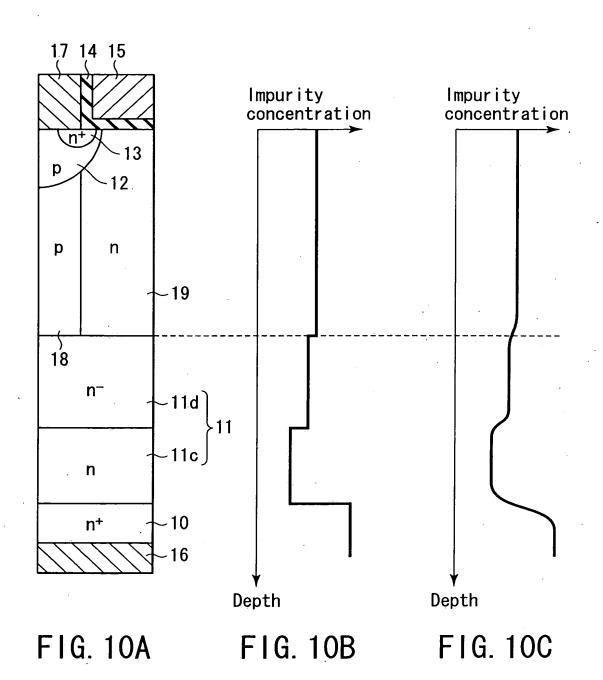


FIG. 8

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 12 OF 60





OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 14 OF 60

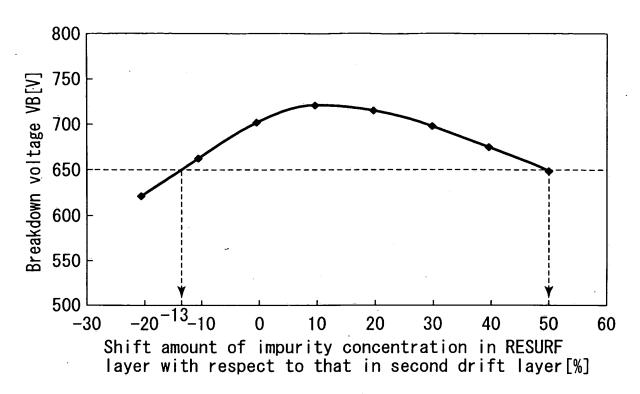


FIG. 11

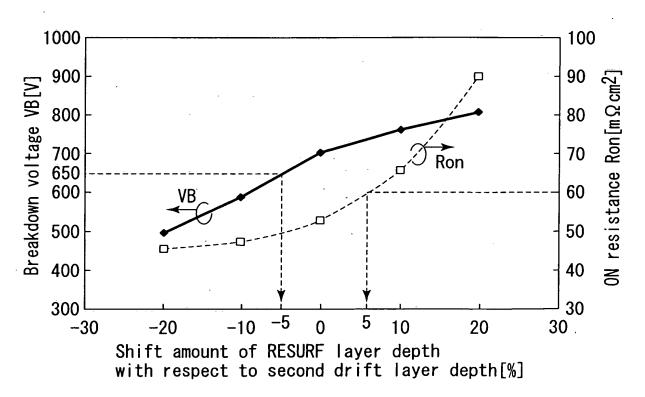


FIG. 12

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 15 OF 60

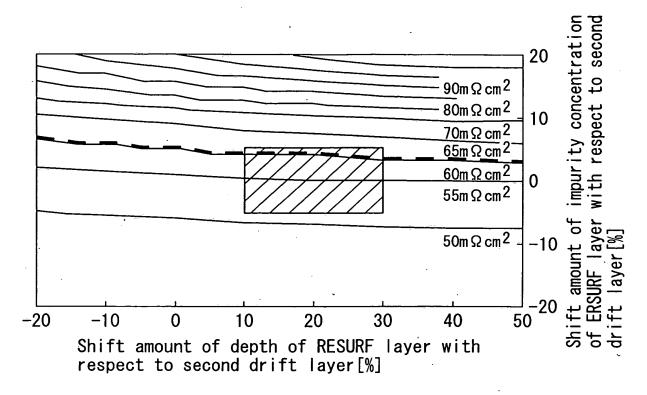


FIG. 13A

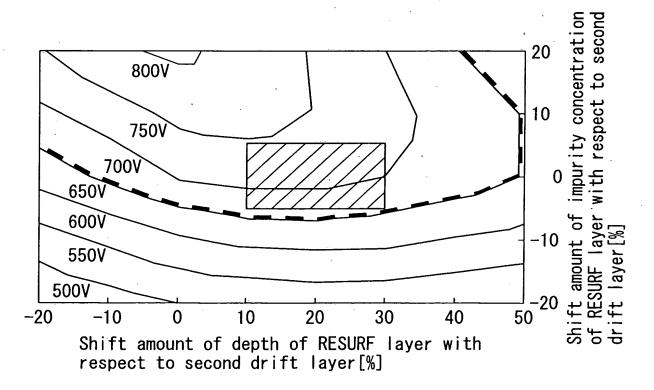


FIG. 13B

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 16 OF 60

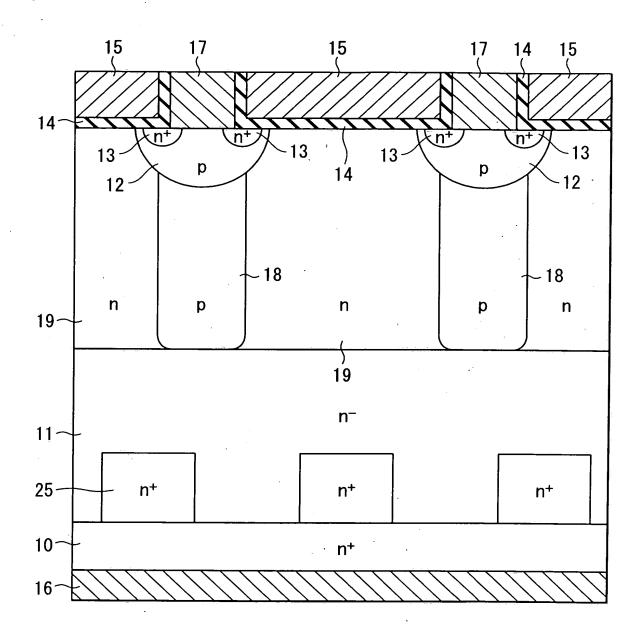
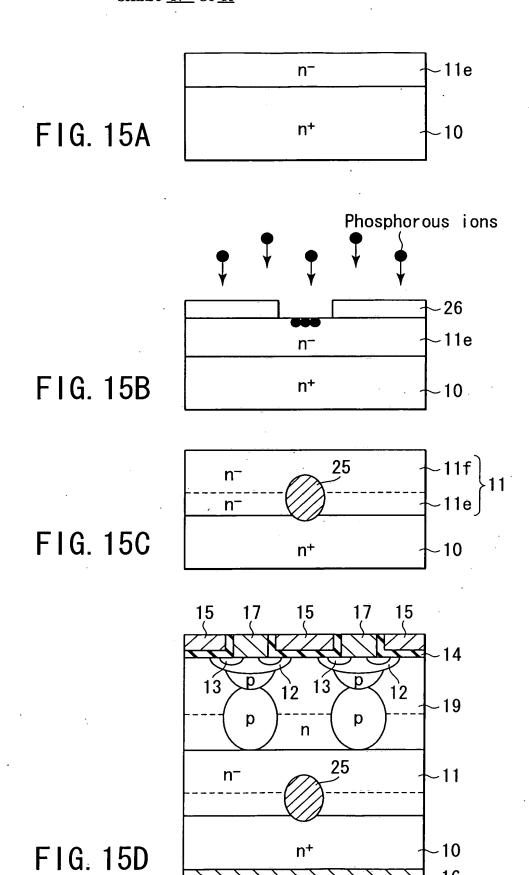


FIG. 14

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DÏV INV: Wataru SAITOH et al SHEET 17 OF 60



OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET <u>18</u> OF <u>60</u>

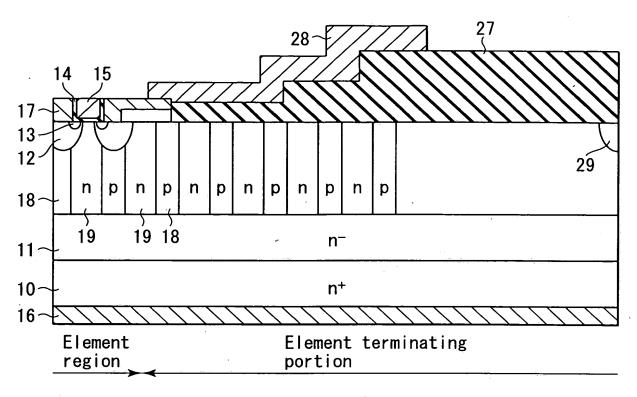


FIG. 16

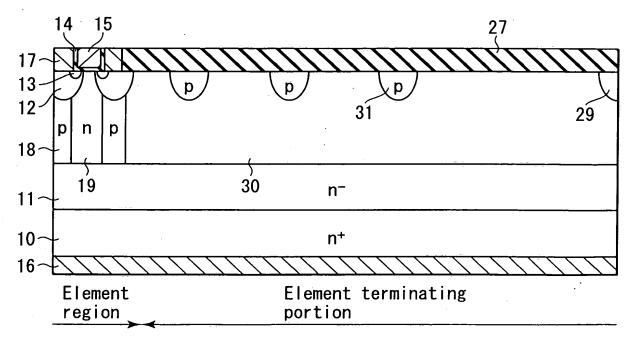


FIG. 17

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 19 OF 60

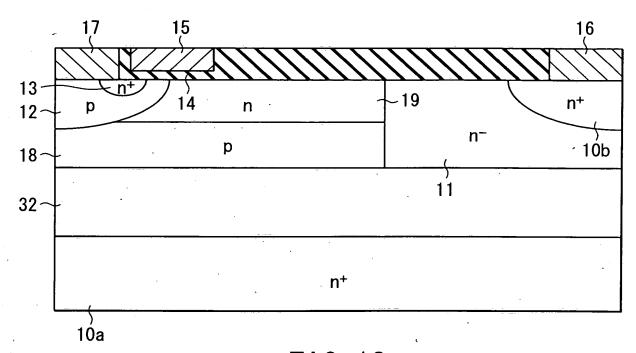


FIG. 18

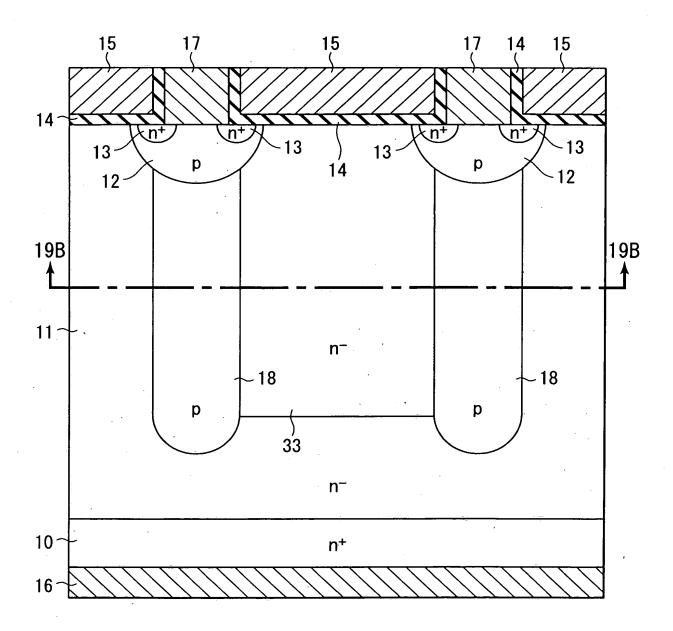


FIG. 19A

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 21 OF 60

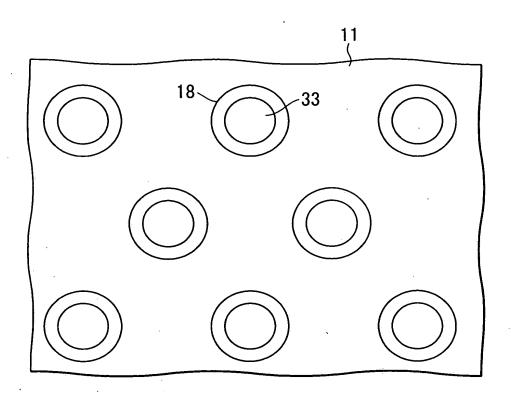


FIG. 19B

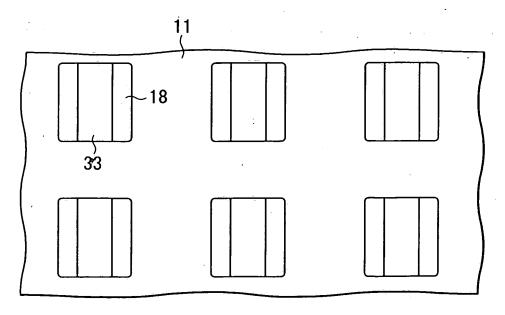


FIG. 19C

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 22 OF 60

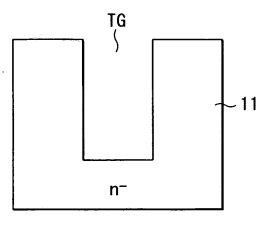


FIG. 20A

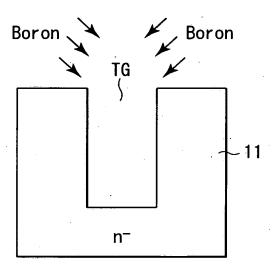


FIG. 20B

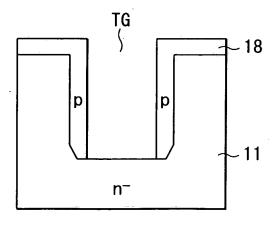


FIG. 20C

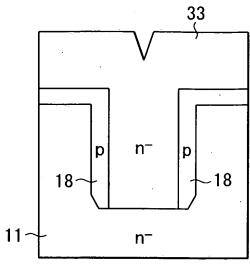


FIG. 20D

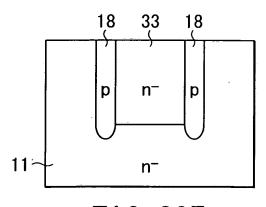
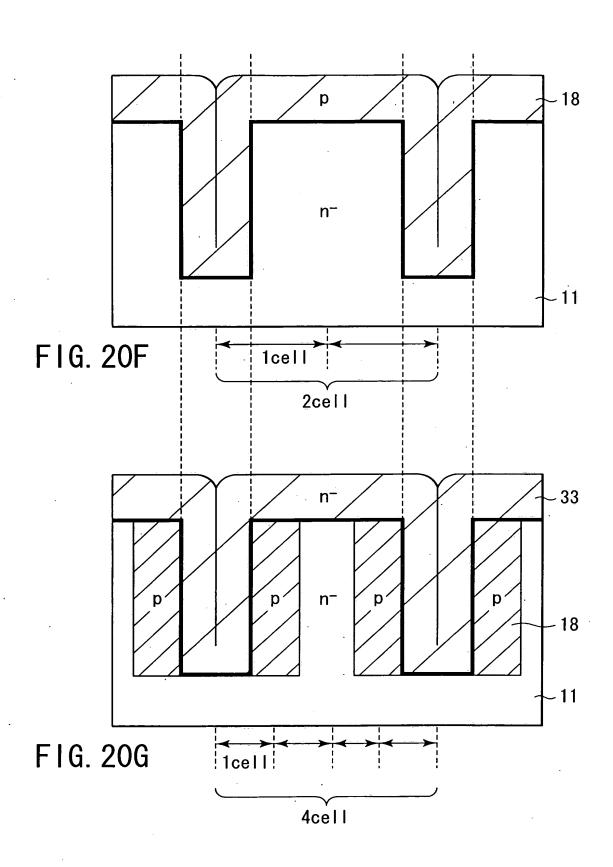


FIG. 20E

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 23 OF 60



OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 24 OF 60

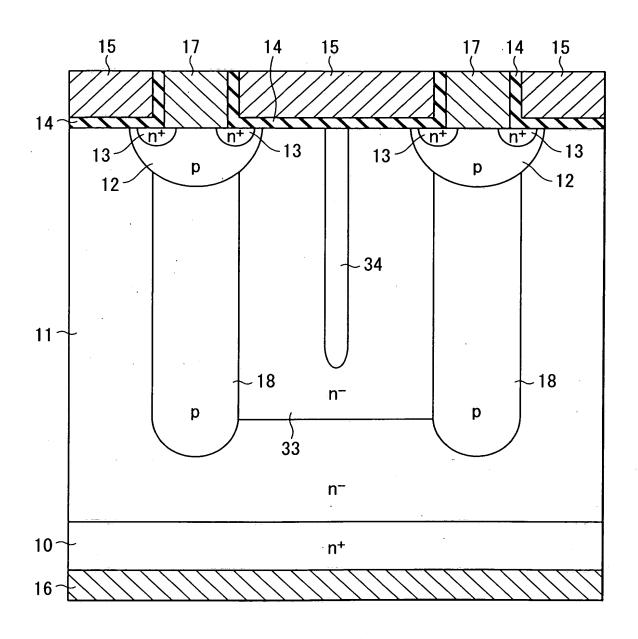


FIG. 21

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 25 OF 60

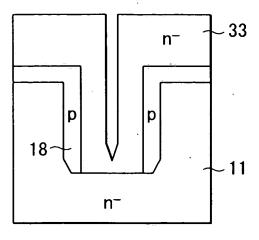


FIG. 22A

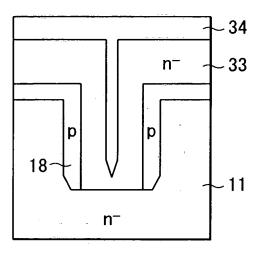


FIG. 22B

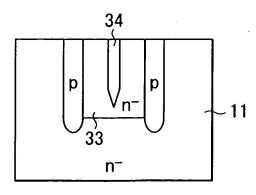


FIG. 22C

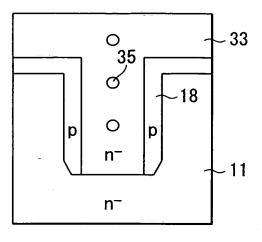


FIG. 23A

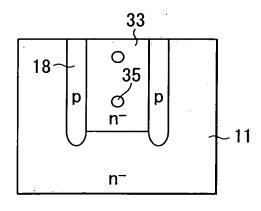


FIG. 23B

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET <u>26</u> OF <u>60</u>

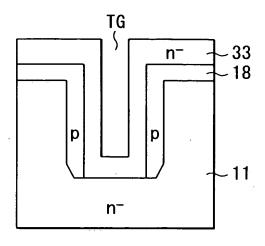


FIG. 24A

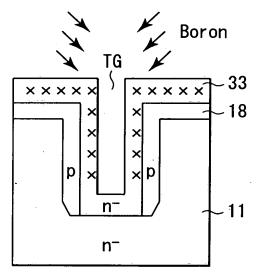


FIG. 24B

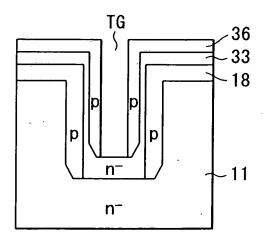


FIG. 24C

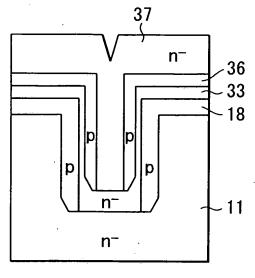


FIG. 24D

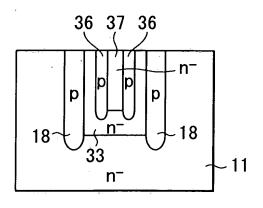


FIG. 24E

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET <u>27</u> OF <u>60</u>

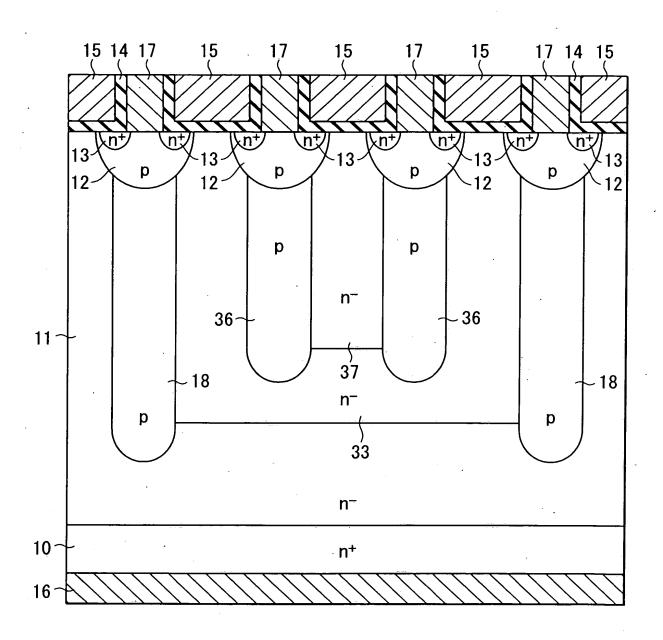
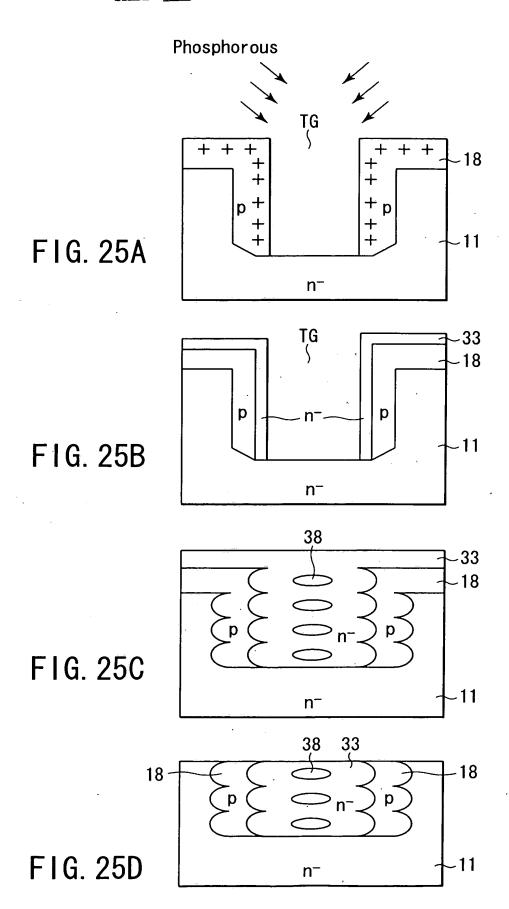
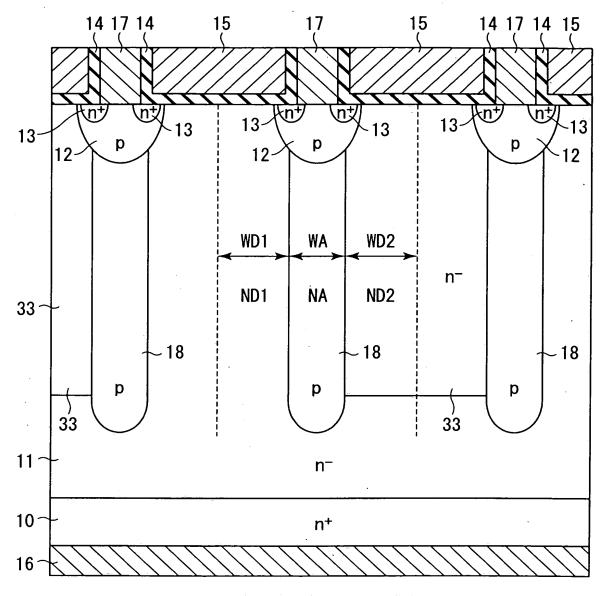


FIG. 24F

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET <u>28</u> OF <u>60</u>



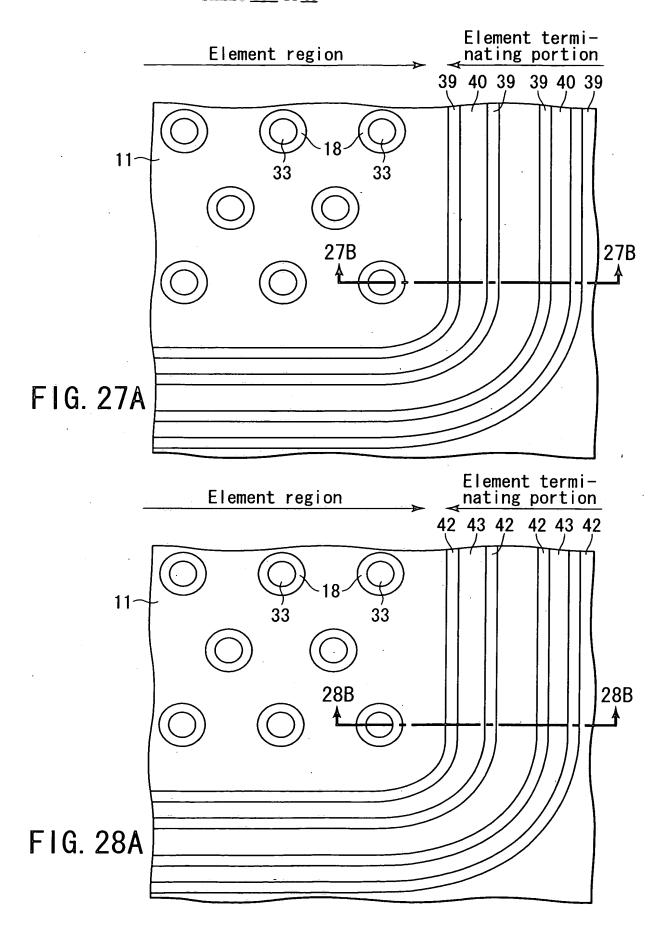
OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 29 OF 60



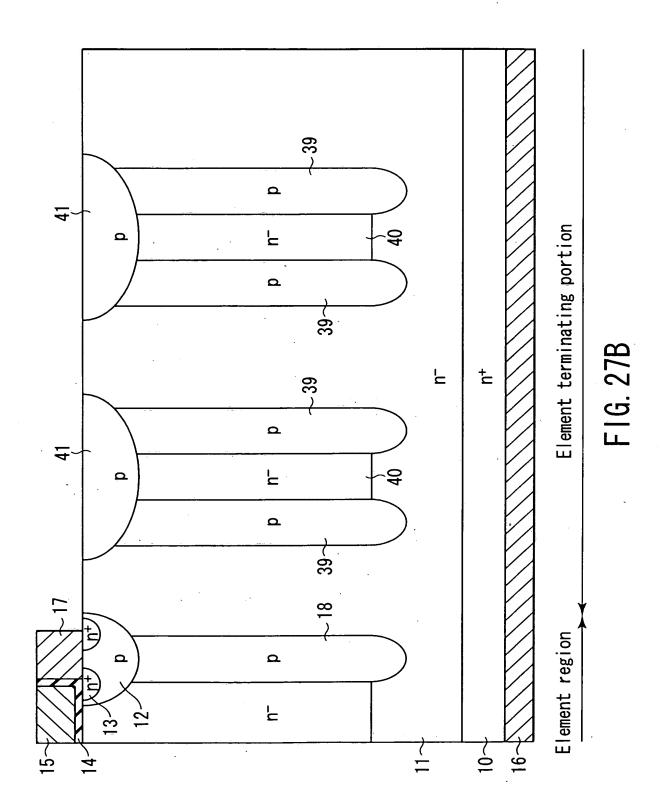
NA·WA=ND1·WD1+ND2·WD2

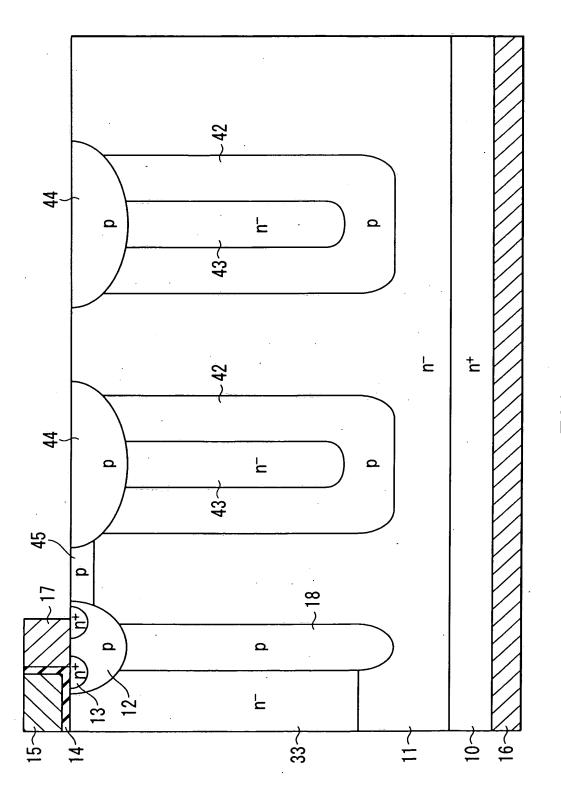
FIG. 26

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 30 OF 60

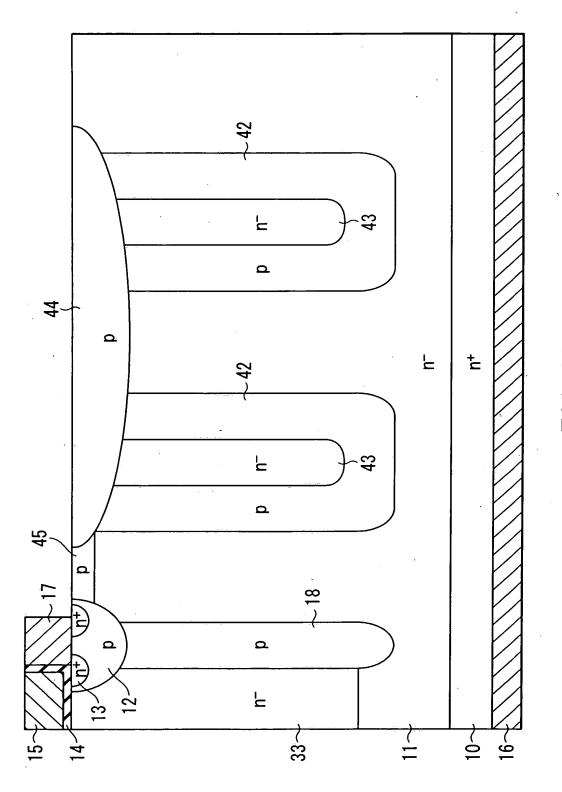


OBLON, SPĪVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 31_OF 60



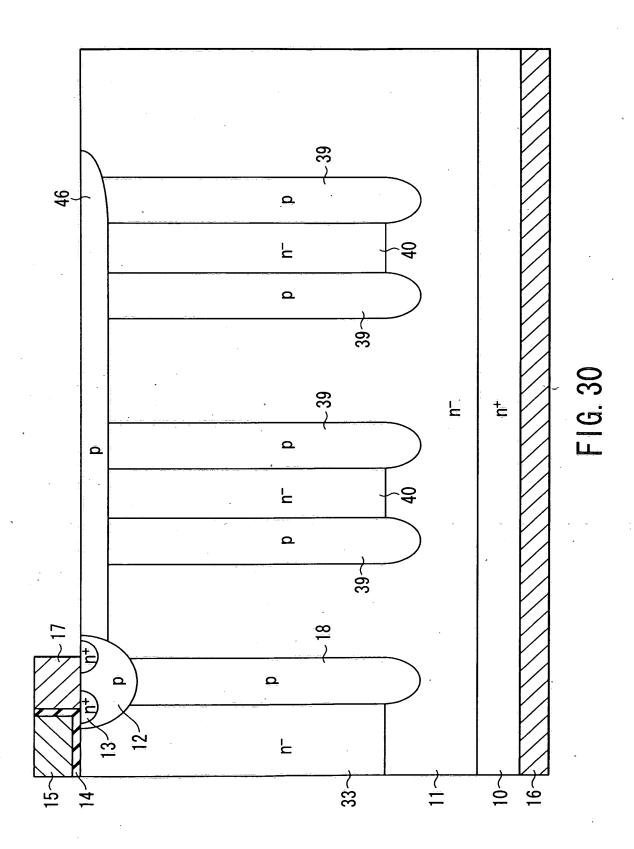


F1G. 28B

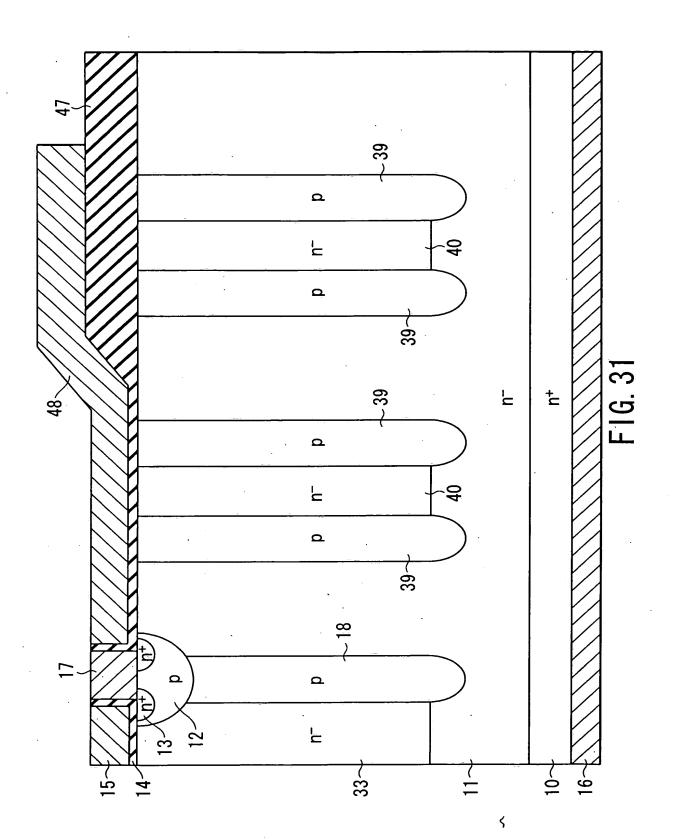


F1G. 29

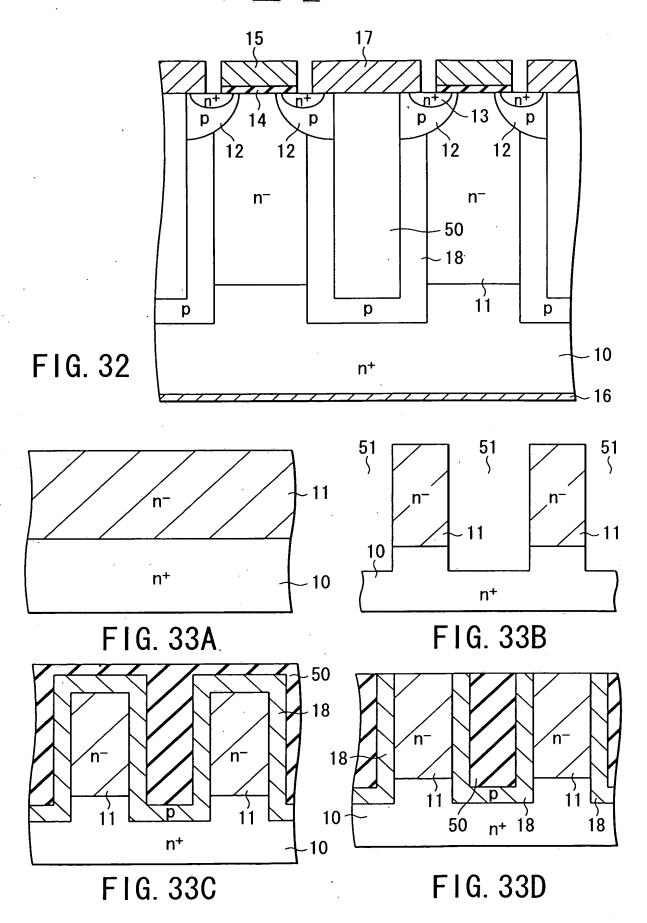
OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 34 OF 60



OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 35 OF 60



OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET <u>36</u> OF <u>60</u>



OBLON, SPĪVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEĒT 37_ OF 60

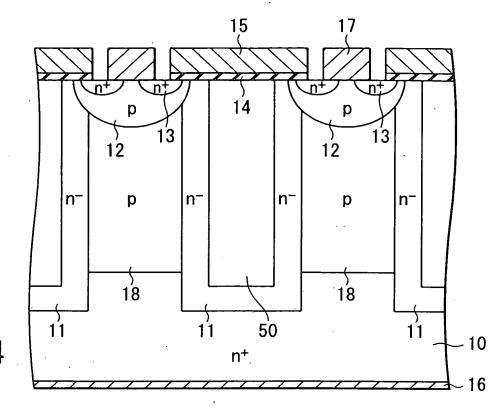


FIG. 34

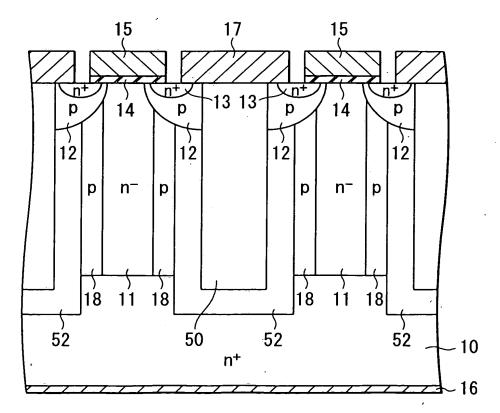
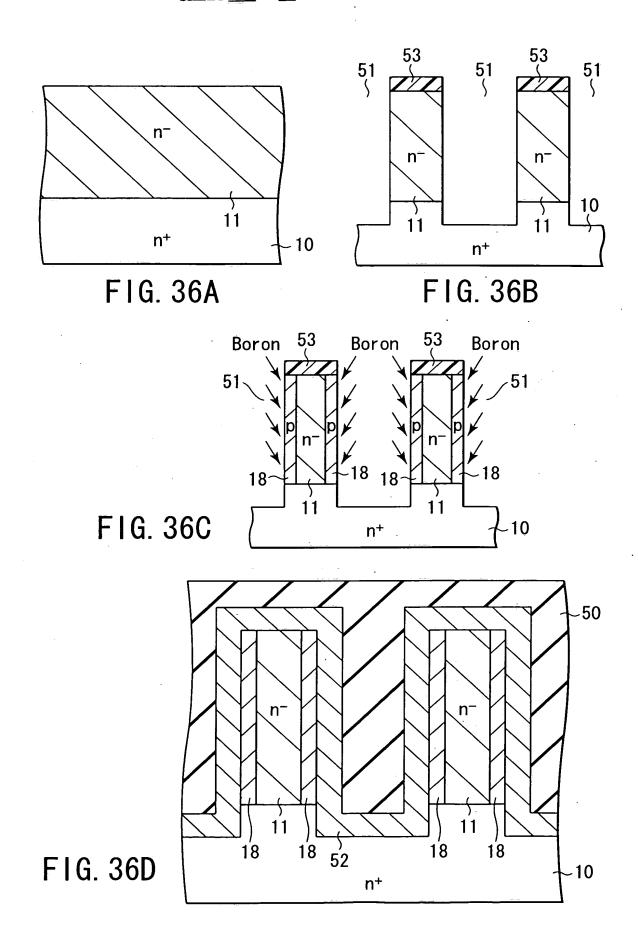
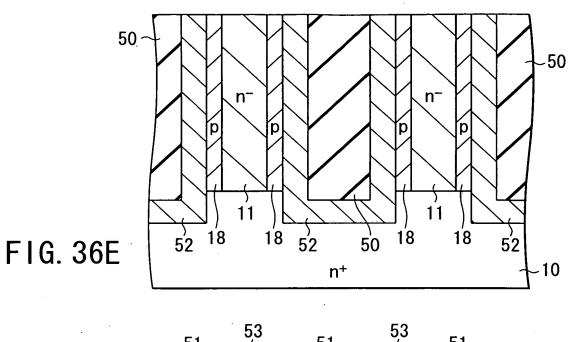


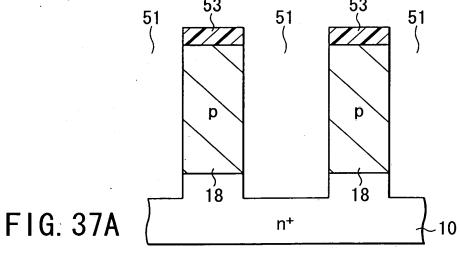
FIG. 35

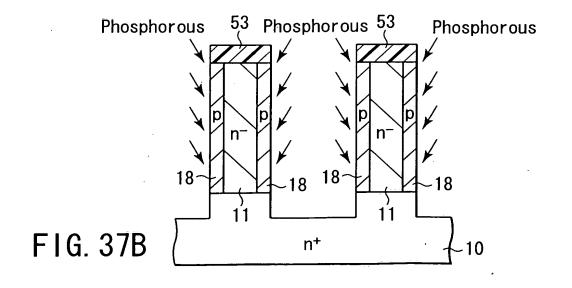
OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 38 OF 60



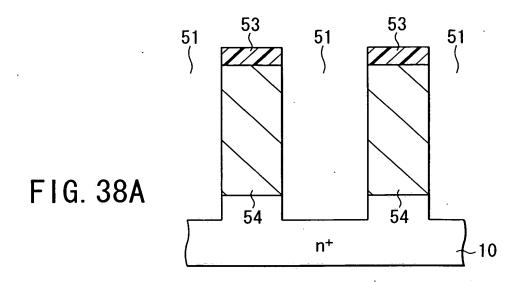
OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 39 OF 60

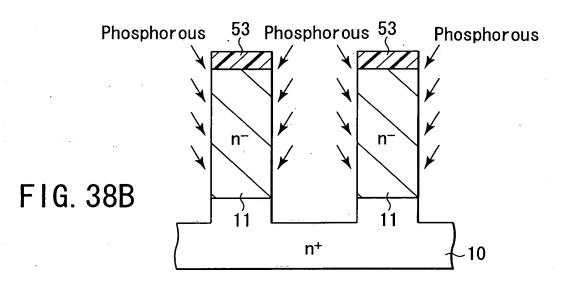


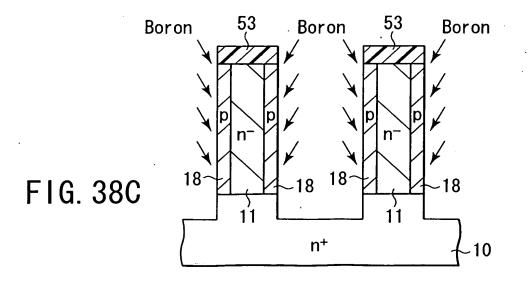




OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 40 OF 60







OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 41 OF 60

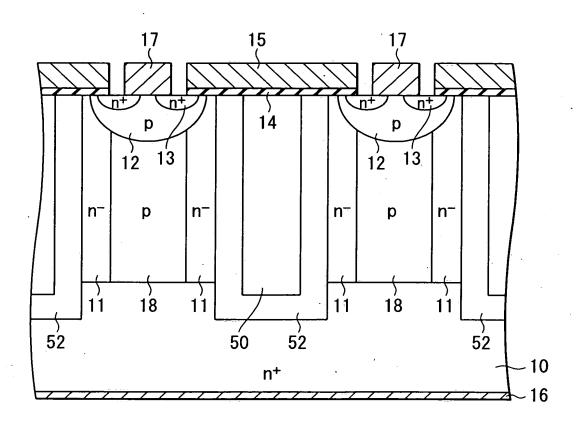
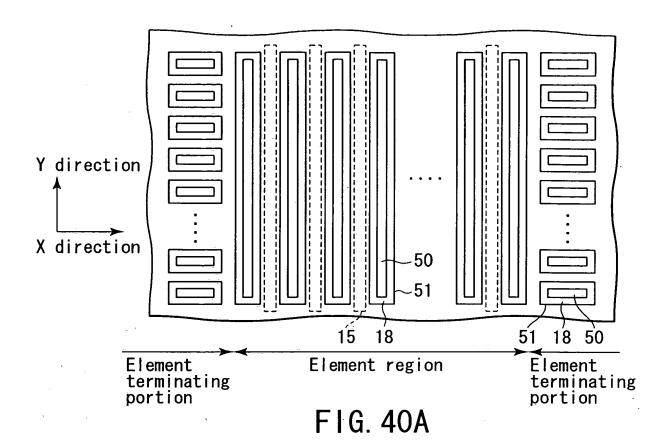
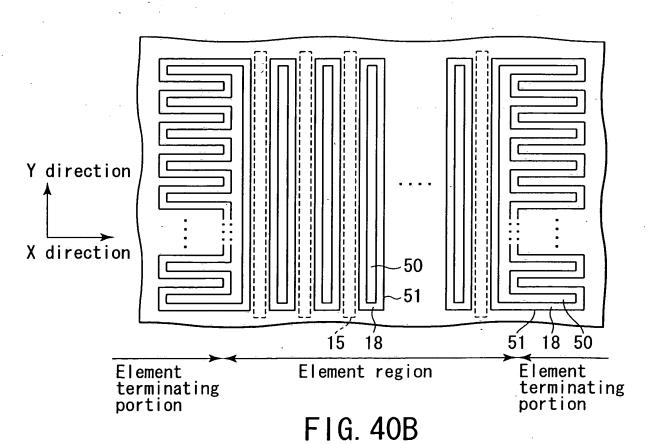


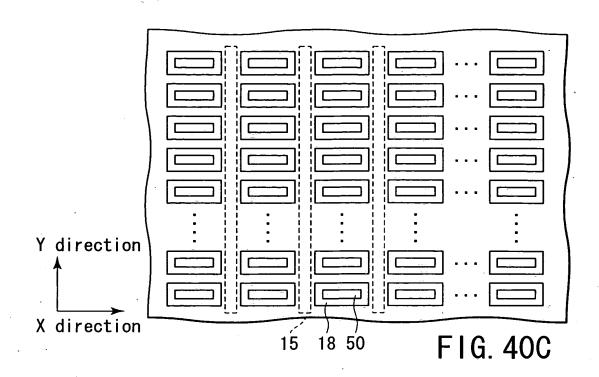
FIG. 39

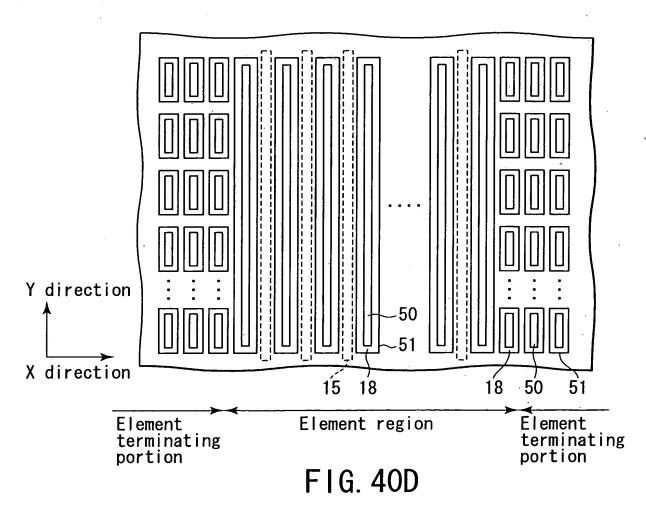
OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 42 OF 60





OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 43 OF 60





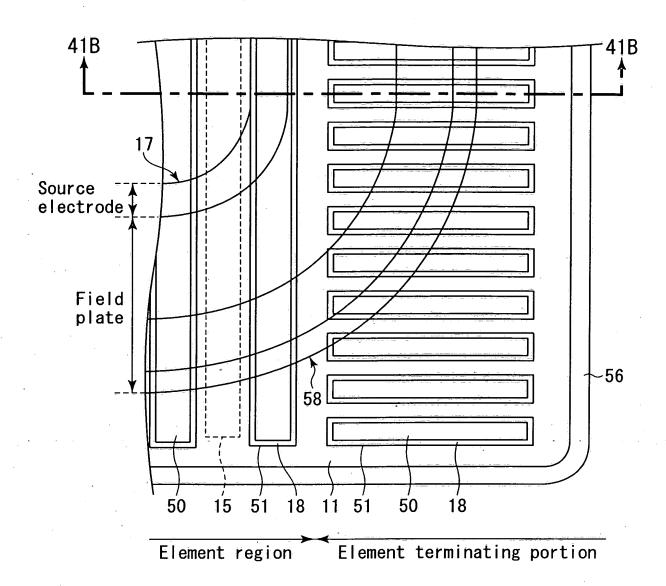
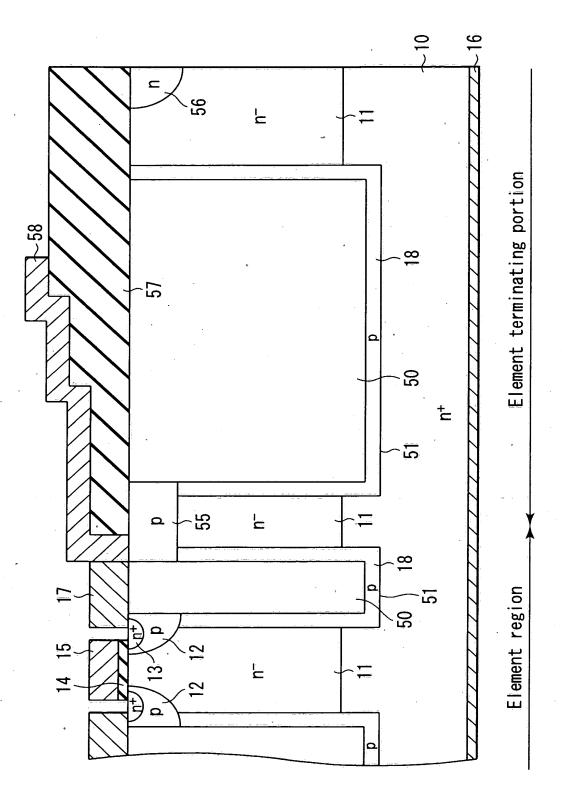


FIG. 41A

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 45 OF 60



F1G. 41B

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 46 OF 60

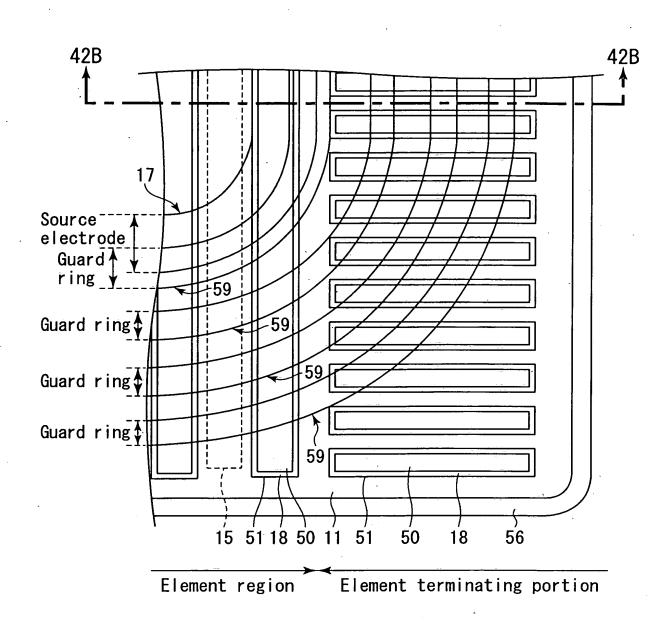
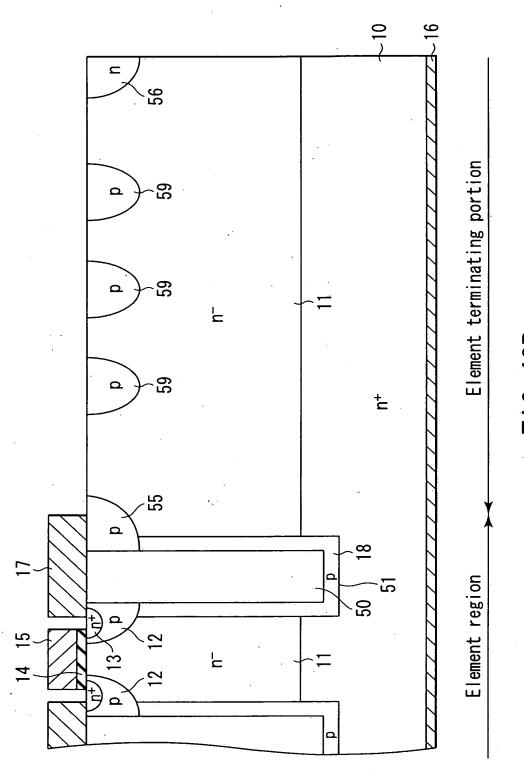


FIG. 42A

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 47 OF 60



F1G. 42B

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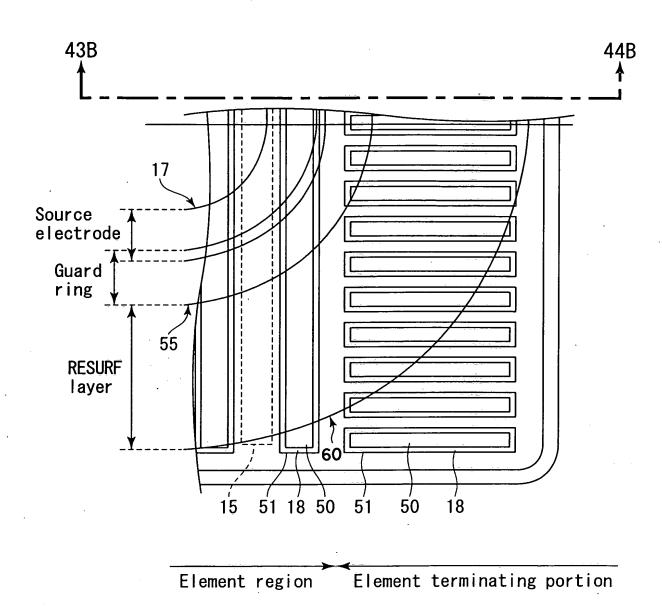
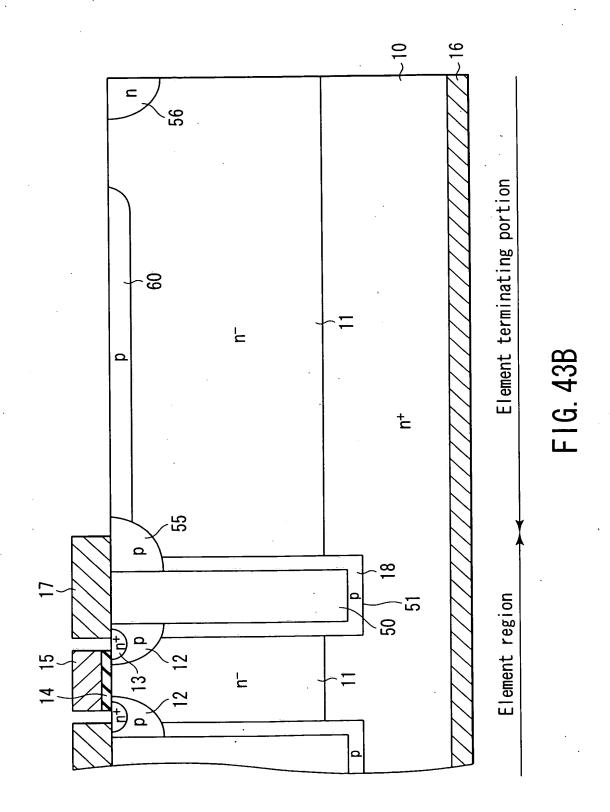
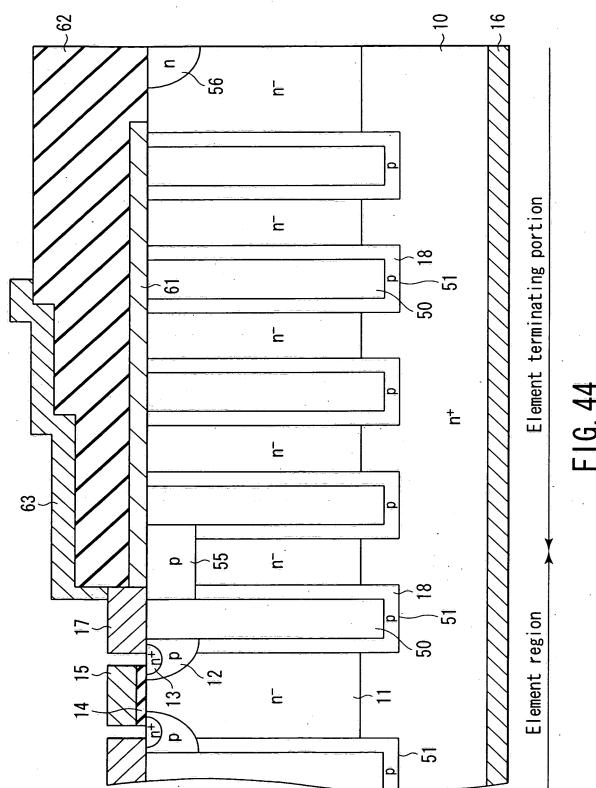


FIG. 43A

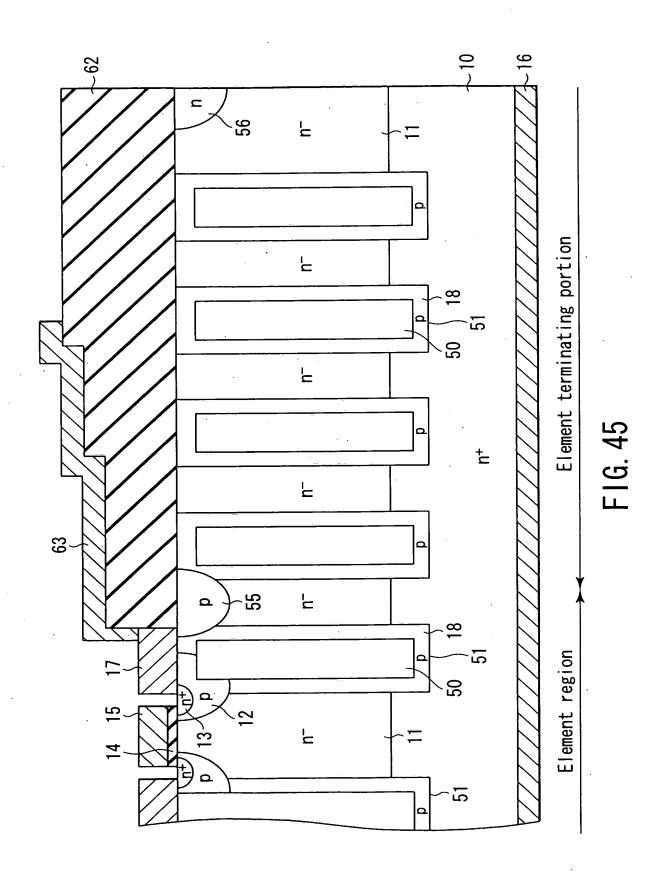
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OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 52 OF 60

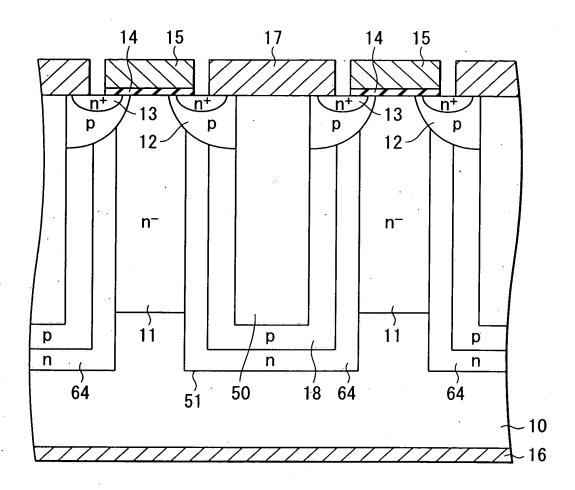


FIG. 46A

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET 53 OF 60

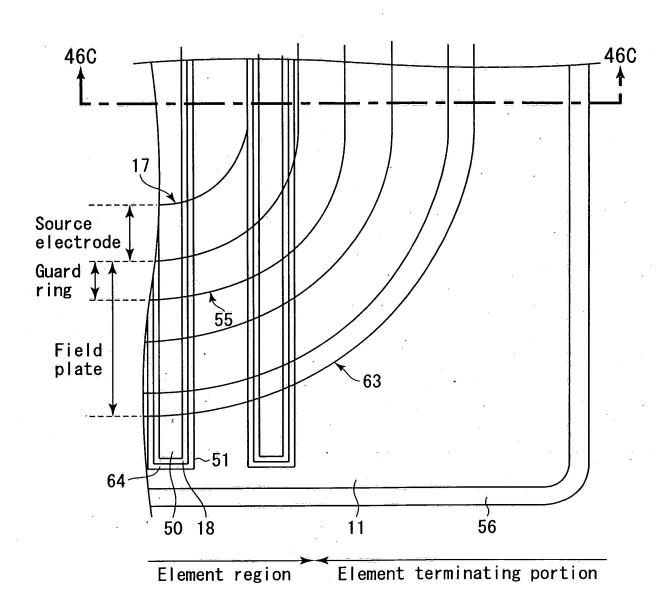
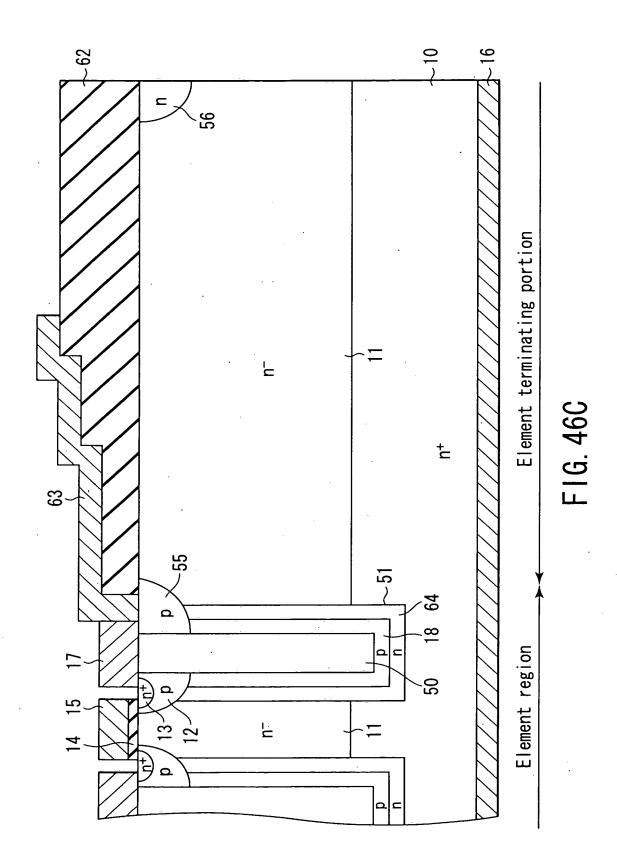
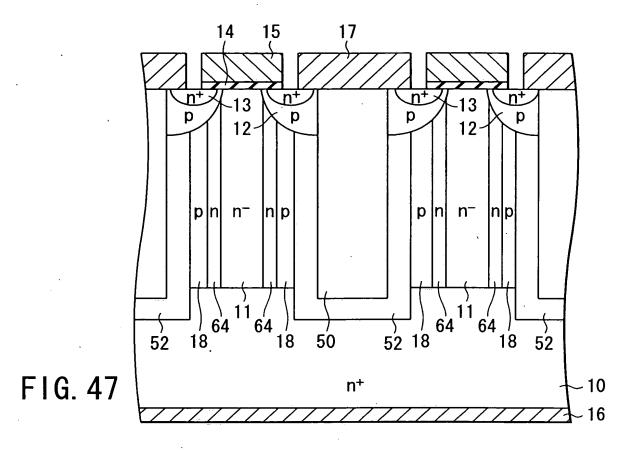


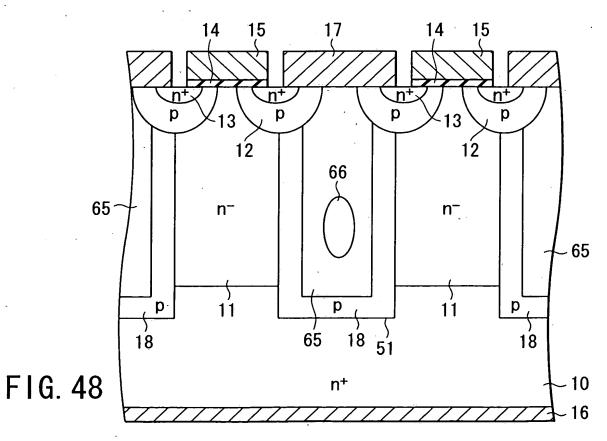
FIG. 46B

OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET <u>54</u> OF <u>60</u>

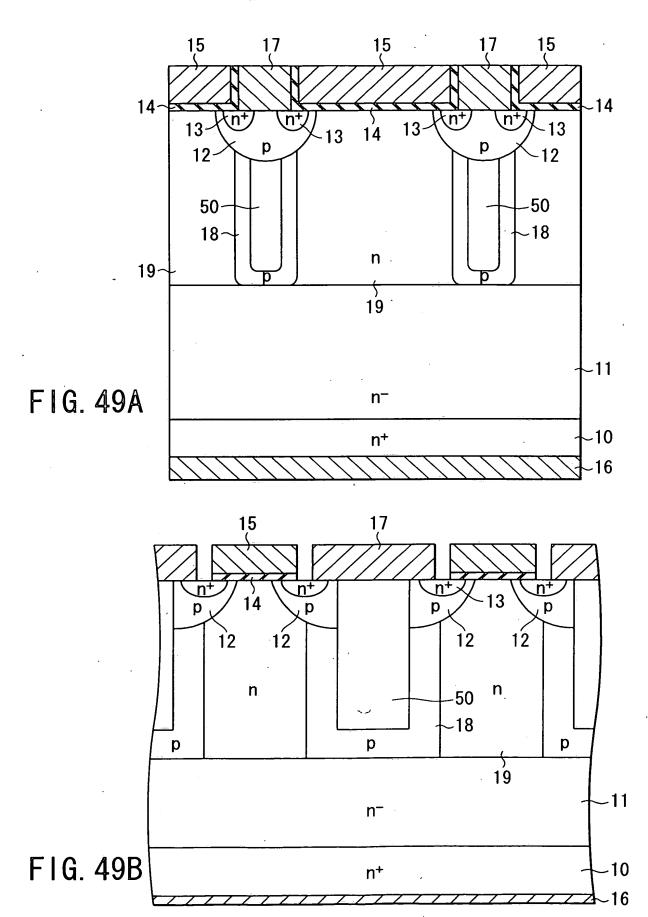


OBLON, SPIVAK, ET AL DOCKET#: 244748US2S DIV INV: Wataru SAITOH et al SHEET <u>55</u> OF <u>60</u>





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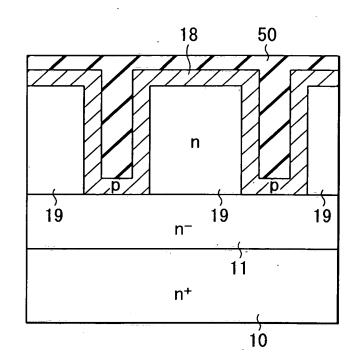


FIG. 50A

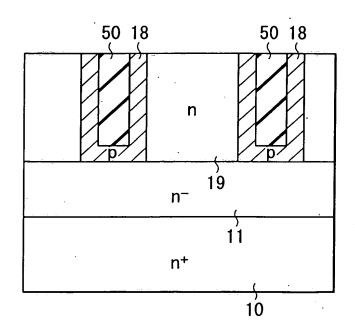
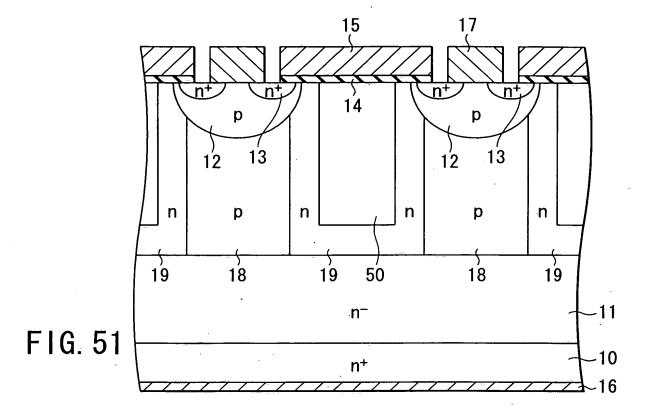
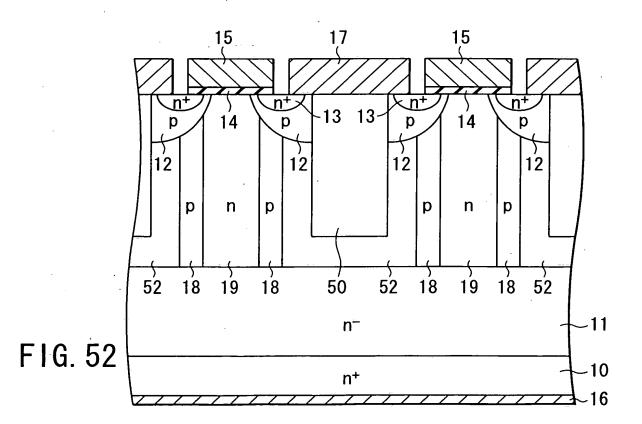


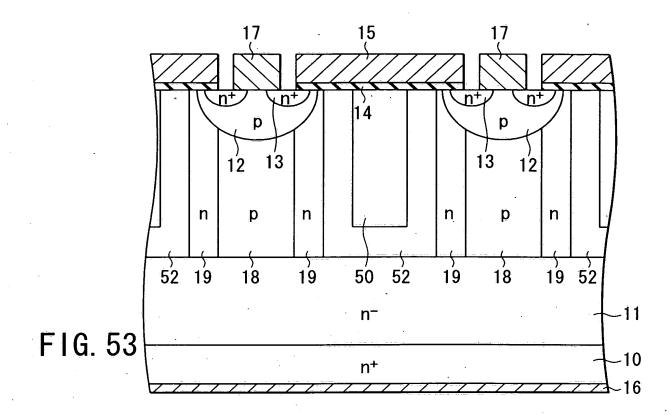
FIG. 50B

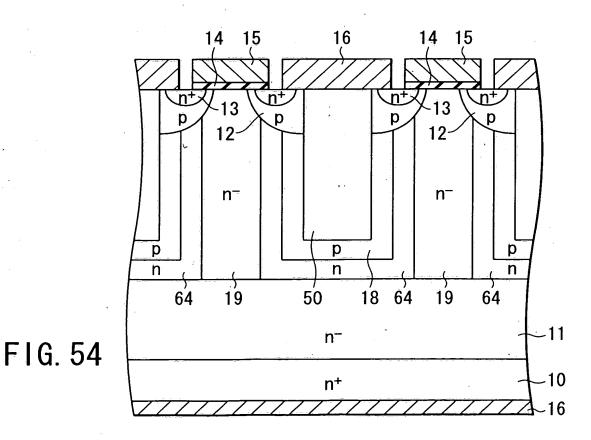
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